



24 May 2017

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Dear Evan

### **Review of Economic Benchmarking of Transmission Network Service Providers Issues Paper - Submission**

Powerlink Queensland (Powerlink) is pleased to make this submission to the Australian Energy Regulator's (AER) Review of Economic Benchmarking of Transmission Network Service Providers (TNSPs). While this submission addresses a number of the matters raised in the Issues Paper prepared by Economic Insights, it also raises broader issues that Powerlink considers should be assessed as part of the review.

As highlighted in previous submissions, Powerlink supports the use of a robust benchmarking framework. A key part of such a framework involves ensuring that:

- the benchmark measures are meaningful and actually reflect what the AER is trying to measure;
- the information underlying the benchmark is being prepared by the relevant businesses on a consistent basis; and
- that the results take account of the differences in operating environment.

### **Scope of the review**

Powerlink recognises that the Issues Paper explores a number of the key issues that have been raised by TNSPs since the AER published its first TNSP Benchmarking Report in November 2014. Given there have now been three fully completed rounds of Regulatory Information Notice (RIN) returns and consequent annual Benchmarking Reports, Powerlink considers there would be merit in broadening the scope of the review and not limiting it to just those issues that have been previously raised by TNSPs.

For example, the overall direction for the specification of outputs to be used in the Multi-lateral Total Factor Productivity measure (MTFP) was set by Economic Insights in a June 2013 paper. Since then stakeholders have had the chance to observe how those recommendations have been given effect and the results that have been obtained. In light of this experience it would be useful to test stakeholder views on this fundamental direction and not be limited to just responding to targeted feedback received in response to the AER's benchmarking reports.

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Within this context, a clear explanation from the AER on what it is trying to measure would assist TNSPs in identifying and providing information that could support more meaningful and robust measures.

## Connections

The measurement of transmission connections as an output has been amongst the most contentious issues in the AER's transmission benchmarking. Economic Insights (2013) originally proposed a simple count of the number of entry and exit points as representative of the fixed charge elements of the transmission network. Using a road analogy Economic Insights noted that:

*... the TNSP will need to provide and maintain entry and exit ramps to the freeway, regardless of the amount of traffic on the freeway. In economic benchmarking studies, the quantity of these functions could be proxied by the number of TNSP entry and exit points.<sup>1</sup>*

From this original conception of connections, the AER's benchmarking formulation extended this to weight the number of connections by the voltage level. The desired formulation seems to have been inadvertently complicated by the Economic Benchmarking RIN referring to the Rules defined term 'connection point'. The Rules define connection point to be the agreed point of supply, which would typically be at the asset boundary between the TNSP and the customer. If the TNSP owns the step down transformers to the connection point this will be weighted less than if the customer takes supply from the high voltage busbar. The end result is that a TNSP output that deploys more assets to supply a customer at a lower voltage is weighted much less than supplying a customer at a higher voltage from the same substation where the customer owns the step-down transformer.

For example, at the Tully Substation in Far North Queensland Powerlink owns the 132/22kV transformers and supplies Ergon at 22kV. At the similarly sized Alan Sheriff Substation in Townsville, Ergon owns the 132/11kV transformers and so takes supply at 132kV. In benchmarking terms the Alan Sheriff Substation counts six times as much as the Tully Substation, even though the assets provide a similar function for a similar cost.

If the AER's intention is to measure the complexity and cost of providing different transmission connections, Powerlink considers this could be best met by using a voltage weighting for the busbar owned by the TNSP that provides supply to the customer. If the TNSP only owns the step-down transformers but not the low voltage busbar, the voltage would then be the high voltage side of the transformer. If the customer owns the transformer the same voltage would be applied.

The Issues Paper notes that AusNet Services has proposed to weight connection points by customer numbers. Powerlink does not support this approach. From a transmission perspective it makes no difference whether a DNSP taking supply from a transmission network is supplying 100 x 1 MW customers or 100,000 x 1kW customers, the output measure from the transmission system should look the same.

## Reliability

Customer reliability is included as a benchmarking output through the use of energy not supplied from the transmission network, valued at the value of customer reliability (VCR). It is included as a negative output as higher values of unserved energy mean a

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<sup>1</sup> Economic Benchmarking of Electricity Network Service Providers, Economic Insights, June 2013, p36

lower level of service to customers. To date, the weighting of the reliability output has not been capped but as noted in the Issues Paper has typically contributed less than 5% to the overall output measure<sup>2</sup>.

The one exception has been AusNet Services in 2009 where a significant loss of supply event occurred following unplanned outages of two 500kV lines. This event had a significant effect on the benchmarking outcomes for AusNet Services for that year. The Issues Paper raises the question of whether the impact of such extreme events should be capped in some form.

Powerlink supports the proposal to cap the influence of unserved energy on the benchmarking results. The system black condition in South Australia on 28 September 2016 forces this issue to be addressed. Powerlink's own analysis suggests that including this event will reduce the total ElectraNet output measure to nearly zero for the 2016/17 year.

Options for capping could include:

- capping the magnitude of individual loss of supply events;
- capping the overall loss of supply in a year (MWh); and/or
- capping the weighting of the reliability measure (%).

Powerlink considers it would be helpful if the AER were to publish analysis that shows the impact of different possible options for capping to allow stakeholders to better understand the outcomes from different options.

## Capitalisation Policy

Powerlink has previously highlighted the impact that the capitalisation policies of individual businesses can have on benchmarking results through its most recent Revenue Proposal<sup>3</sup>. As a business, Powerlink typically defines its assets at a higher level than other businesses. For example, a Powerlink primary plant asset is an entire switchbay which includes circuit breaker, isolators, earth switches and instrument transformers, whereas other businesses may define each of these items as separate financial assets.

In its Draft Decision on Powerlink's Revenue Proposal the AER acknowledged the limitations of the current benchmarking model in this regard. Powerlink considers the AER should use the opportunity of this review to develop benchmarking improvements so that differences in capitalisation policy do not affect relative performance.

## Operating Environment Factors

Throughout the AER's Better Regulation Program that led to the current benchmarking methodology it was recognised that there are significant differences in the operating environment factors (OEFs) faced by different transmission companies. As part of the Economic Benchmarking RIN the AER collects a range of information from TNSPs that is specifically directed to articulating these OEFs. These include:

- Terrain factors
  - Total number of vegetation maintenance spans
  - Average vegetation maintenance span cycle (years)
  - Average number of trees per vegetation maintenance span
  - Average number of defects per vegetation maintenance span

<sup>2</sup> AER Review of Economic Benchmarking of TNSPs – Issues Paper, April 2017, p8

<sup>3</sup> Powerlink 2018-22 Revenue Proposal, Appendix 4.01, p11

- Number of spans in tropical zones
- Route line length with standard vehicle access (km)
- Route line length at an altitude > 600m (km)
- Total number of spans in bushfire risk areas
  
- Network factors
  - Route line length (km)
  - Variability of dispatch (%)
  - Concentrated load distance (km)
  - Total number of spans

Powerlink considers that, to improve its benchmarking approach, the AER should materially improve its explanation of how it takes account of OEFs in its economic benchmarking. The TNSP Annual Benchmarking Report 2016 states that key OEFs are captured and that 'MFTP takes into account a TNSP's assets and its connection, maximum demand and energy throughput densities'.

While Powerlink agrees that connections, maximum demand and energy throughput are included, it is not clear that these are incorporated as density measures. From Powerlink's understanding of the benchmarking models they are only included to describe the quantity of outputs from the TNSP and are not actually normalised for factors such as the size of the service area. Powerlink considers the AER should more clearly explain how OEFs are incorporated into the benchmarking and how they influence the results. For example, it would be more meaningful to show results both with and without OEFs so that stakeholders can clearly understand the extent of their influence to the measures adopted by the AER.

If you have any questions in relation to this submission, please contact Jennifer Harris on (07) 3860-2667 or via email at [jharris@powerlink.com.au](mailto:jharris@powerlink.com.au).

Yours sincerely



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